REMARKS

By this amendment, claims 1 and 2 are revised and claim 3 is canceled to place this application in condition for allowance. Currently, claims 1, 2 and 4-11 are before the Examiner for consideration on their merits.

While this amendment is presented after a final rejection, it is submitted that it so clearly places the application in condition for allowance that the Examiner can review the amendment and pass the application onto allowance. The change of Al content does not alter the issues to an extent that the Examiner cannot reasonably conclude that the current prior art is still the closest and that the alleged *prima facie* case of obviousness has been overcome. Even if the Examiner is not convinced of the patentability of the claims in their amended form, Applicants request entry of this amendment for purposes of appeal.

First, claim 1 has been revised to include the limitation of claim 3 therein. In addition, the lower limit if Al is set at 0.011%. This revision does not introduce new matter since this value can be found in Table 1, No. 7, of the specification.

Turning now to the rejection, the Examiner alleges that a *prima facie* case of obviousness is established via the teachings of United States Patent No. 6,129,992 to Sakuma et al. (Sakuma). First, it should be noted that Sakuma is based on JP 11-140601 and JP 2000-290759 as cited on page 2 of the specification.

Sakuma discloses two steel sheets, which are defined in claims 1 and 2 thereof. These steel sheets differ by content of Al and B. The Al in claim 1 is less than 0.005%. In claim 2, Al is 0.005 to 0.04%. For B, claim 1 does not require for B, but claim 2 requires 0.0010 to 0.0030%.

The revision to claim 1 now raises two issues for consideration by the Examiner. The first is the requirement of a particular amount of Al coupled with the absence of B. The level of C is also an issue as discussed below.

In addressing Sakuma, the claim 1 alloy is referred to as the Sakuma claim 1 embodiment and the claim 2 alloy of Sakuma is referred to as the Sakuma claim 2 embodiment.

The Sakuma claim 2 embodiment cannot be used as a basis for the rejection since it requires the presence of B. B is excluded from claims 1 and 2 by virtue of the use of "consisting of." Moreover, since B is essential to the Sakuma claim 2 embodiment, there is no legitimate reason that one of skill in the art would remove it and this is further explained below.

Therefore, the only basis for making a rejection is the Sakuma claim 1 embodiment, wherein B is not required.

On the issue of the presence of B, Sakuma teaches that if B is not added, Al should be less than 0.005%, which is the Sakuma claim 1 embodiment. If Al is contained in an amount more than 0.005%, then some amounts of B are needed, which is the Sakuma claim 2 embodiment.

The reason for the presence of B when Al is at a certain level is as follows. The formation of fine precipitates of AlN is to be avoided in the cold rolled steel sheet since it degrades magnetic properties. If Al is negligible, then precipitation of AlN is also negligible (Sakuma claim 1 embodiment), and presence of B is not required.

However, Al is required as an oxidizing agent in certain instances so that the Al content of the steel may be at a level that causes AlN precipitation and the magnetic property degradation noted above. As a result of the higher level of Al, B is added and N is made to react with the B to form BN in preference to AlN and the precipitation of AlN is prevented.

In Sakuma, Table 1 discloses only two kinds of examples, those pertaining to the Sakuma claim 1 or claim 2 embodiments. There is no steel, which abides by the composition of claim 1 or 2 of the instant application.

In Table 1, the steels of the Sakuma claim 1 embodiment are steels A, D, E, G, and R. These steels exhibit negligible Al and, thus do not contain B. When considering that claims 1 and 2 are now revised to define a lower limit of Al of 0.011%, there is no overlap with respect to the Sakuma claim 1 embodiment, which has no more than 0.005% Al.

The Steels of Sakuma's claim 2 embodiment are steels C, F, K, and Q. These steels do have an overlapping amount of Al when compared to claims 1 and 2 of the application. However, each of these steels also contains B, which is excluded from claims 1 and 2. Put another way, there is no steel in Sakuma that has the claimed level of Al and does not contain B. Because of the failure of Sakuma to teach an overlap in the Sakuma claim 1 embodiment, a *prima facie* case of obviousness cannot be said to exist. Because the Sakuma claim 2 embodiment requires B and claims 1 and 2 of the instant application exclude B, the Sakuma claim 2 embodiment cannot support a rejection under 35 U.S.C. § 103(a).

Another distinction between the invention and the steels of Sakuma is in the carbon content. Still referring to Table 1, all of the steels A-R have carbon contents that are less than 0.05% except for comparison steels S and T. These comparison steels cannot be employed or used in the rejection since they are also outside the claimed ranges of claims 1 and 2 because of their silicon content.

The invention is also not just an arbitrary control of carbon, aluminum, and boron content. Instead, the inventors have discovered that, under conditions of relatively high levels of carbon, an amount of 0.011-0.030% Al, the absence of boron, and control of the processing of

the steel sheet, the fine precipitation of AlN can be inhibited in a cold rolled steel sheet. The process for producing the steel sheet is controlled by adopting a coiling temperature of 600-700 °C, which is for allowing AlN precipitation to proceed thoroughly beforehand and to grow to AlN particles. This makes it possible to suppress precipitation of the fine AlN during annealing in a later processing step, thus enabling control of the crystal grain diameter of the final product, see page 10, lines 5-25, of the present specification.

Turning back to the rejection, the Examiner could allege that it would be obvious to remove the B in Sakuma's claim 2 embodiment. However, Sakuma specifically teaches away from this modification since B is essential when Al content is high. One of skill in the art would not be led to removal of the very element added to obtain the aim of Sakuma.

It is also not proper to allege that one could increase the Al content of Sakuma's claim 1 embodiment so as to arrive at the invention. As explained above, Sakuma does not want high amounts of Al since they form undesirable AlN precipitates. Therefore, any increase in the amount of Al in the Sakuma claim 1 embodiment would have to have a corresponding addition of B, which would make the modified alloy of Sakuma, in essence, the same as the Sakuma claim 2 embodiment, and thus irrelevant for obviousness purposes as applied to claims 1 and 2 of the instant application.

In light of the change to claims 1 and 2, these claims along with their dependent claims 3-11 are in condition for allowance. Sakuma cannot establish a *prima facie* case of obviousness against these claims obvious for the simple reason that the composition of claims 1 and 2 is neither disclosed nor suggested. Given Sakuma's desire for either low Al or high Al and B, one of skill in the art cannot arrive at the invention, i.e., high Al without B, with the reliance of

hindsight. Since the use of hindsight creates an unsustainable rejection, the Examiner has no option but to allow claims 1 and 2 and their respective dependent claims.

Accordingly, the Examiner is requested to examine this application in light of this amendment and pass all pending claims onto issuance.

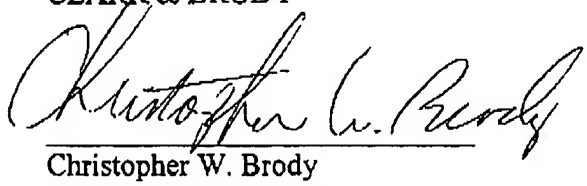
If the Examiner believes that an interview would be helpful in expediting the allowance of this application, the Examiner is requested to telephone the undersigned at 202-835-1753.

The above constitutes a complete response to all issues raised in the Office Action dated September 18, 2008.

Again, reconsideration and allowance of this application is respectfully requested.

Please charge any fee deficiency or credit any overpayment to Deposit Account No. 50-1088.

Respectfully submitted,
CLARK & BRODY



Christopher W. Brody
Registration No. 33,613

Customer No. 22902
1090 Vermont Avenue, NW, Suite 250
Washington, DC 20005
Telephone: 202-835-1111
Facsimile: 202-835-1755

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